No fee is believed to be due for the submission of this response. Should any fees be required, please charge such fees to Brobeck, Phleger & Harrison, LLP Deposit Account No. 50-1640.

Respectfully submitted,

Dated: 6/7/02

By: Craig L. Puckett (Reg. No. 43,023)

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## EXHIBIT A THE CLAIMS THAT WILL BE PENDING UPON ENTRY OF THE AMENDMENT FILED: June 7, 2002

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1. A method for recovering plant cells from cryopreservation comprising: obtaining cryopreserved plant cells;

thawing the cryopreserved plant cells by warming by heating the cells to a temperature above the freezing point of the plant cells to obtain thawed plant cells;

incubating the thawed plant cells in a media having at least one cryoprotective agent and a stabilizer; and

removing any osmotic or cryoprotective agent, if present, and recovering the thawed plant cells.

- 2. The method for recovering plant cells according to claim 1, wherein the plant cells are gymnosperm or angiosperm.
- 3. The method for recovering plant cells according to claim 2, wherein the gymnosperm is a species of Abies, Cypressus, Ginkgo, Juniperus, Picea, Pinus, Pseudotsuga, Sequoia, Taxus, Tsuga, or Zamia.
- 4. The method for recovering plant cells according to claim 3, wherein the *Taxus* species is *T. baccata*, *T. brevifolia*, *T. canadensis*, *T. chinensis*, *T. cuspidata*, *T. floridana*, *T. globosa*, *T. media*, *T. nucifera* or *T. wallichiana*.
- 5. The method for recovering plant cells according to claim 2, wherein the angiosperm is monocotyledon or dicotyledon plant cells.
- 6. The method for recovering plant cells according to claim 5, wherein the monocotyledon plant cells are species of the genus Avena, Cocos, Dioscorea, Hordeum, Musa, Oryza, Saccharum, Sorrghum, Triticum, or Zea.
- 7. The method for recovering plant cells according to claim 5, wherein the dicotyledon plant cells are species of the genus Achyrocline, Atropa, Brassica, Berberis, Capsicum, Catharanthus, Conospermum, Datura, Daucus, Digitalis, Echinacea,

Eschzcholtzia, Glycine, Gossypium, Hyoscyamus, Legumes, Lupinus, Lycopersicum, Malus, Medicago, Nicotiana, Panax, Pisum, Rauvolfia, Ruta, Solanum, Sophora, or Trichosanthes.

- 8. The method for recovering plant cells according to claim 1, wherein the cryoprotective agent is removed by dilution of the mixture or pelleting of the cells.
  - 9-21 Canceled without prejudice.
  - 22. A method for recovering plant cells from cryopreservation comprising: obtaining cryopreserved plant cells;

thawing the cryopreserved plant cells by heating the cells to a temperature above the freezing point of the cells to obtain thawed plant cells;

incubating the thawed plant cells in a media having at least one ethylene inhibitor, oxygen radical scavenger, divalent cation, or cryoprotective agent; and recovering the thawed plant cells.

- 23. The method for recovering plant cells according to claim 22, wherein the divalent cation is calcium magnesium, or manganese.
  - 24. Canceled without prejudice.
- 25. The method for recovering plant cells according to claim 22, wherein the ethylene inhibitor is an ethylene biosynthesis inhibitor or an ethylene action inhibitor.
  - 26-60 Canceled without prejudice.



- 61. The method for recovering plant cells according to claim 1, wherein the recovered plant cells are not genetically or phenotypically altered by cryopreservation as compared to non-cryopreserved plant cells.
- 62. The method for recovering plant cells according to claim 1, wherein the thawed plant cells are incubated in a liquid suspension and the cells are recovered in liquid media.

63. The method for recovering plant cells according to claim 1, wherein the cells were pretreated with a cryoprotective agent and a stabilizer.

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- 64. The method for recovering plant cells according to claim 1, wherein the osmotic or cryoprotective agent is removed by dilution of a mixture of thawed plant cells and media or by pelleting the thawed plant cells.
- 65. The method for recovering plant cells according to claim 1 further comprising a regrowth step
- 66. The method for recovering plant cells according to claim 1, wherein the cryopreserved cell has a cryoprotective agent present in a concentration of about 0.5 M to about 2 M.
- 67. The method for recovering plant cells according to claim 1, wherein the cryopreserved cell has a cryoprotective agent present in a concentration of about 5% to about 20% by weight.
- 68. The method for recovering plant cells according to claim 63, wherein the cryoprotective agent is DMSO, ethylene glycol, fructose, sucrose, glucose, sorbitol, mannitol, glycerol, or a combination thereof.
- 69. The method for recovering plant cells according to claim 1, wherein the thawing step comprises heating the cryopreserved cell at a rate of at least about 30°C per minute to about 60°C per minute..
- 70. The method for recovering plant cells according to claim 1, wherein the thawing step comprises heating the cryopreserved cell at a rate of at least about 140°C per minute to about 200°C per minute.
- 71. The method for recovering plant cells according to claim 25 wherein the ethylene action inhibitor is a silver salt.

- 72. The method for recovering plant cells according to claim 71, wherein the silver salt is silver thiosulfate, silver nitrate, silver chloride, silver acetate, silver phosphate, silver sulfate, silver nitrite, or combinations thereof.
- 73. The method for recovering plant cells according to claim 25, wherein the ethylene biosynthesis inhibitor is spermidine, spermine, catechol, n-propyl gallate, hydroquinone, ferulic acid, alar, phenylethylamine, salicyl alcohol, salicylic acid, indomethacin, or combinations thereof.
- 74. The method for recovering plant cells according to claim 22, wherein the cryoprotective agent is sorbitol, mannitol, sucrose, trehalose, proline, or combinations thereof.